

Work Order ID 97772

February-22-13 11:00:24 AM

97772

Rev A 5/3/25
~~PRELIMINARY ISSUE~~

Page 1

Item ID: D4686-1
Revision ID: PRELIM
Item Name: Spacer

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 2/22/13 Start Qty: 4.00 *4*
Required Date: 3/01/13 Req'd Qty: 4.00 *4*

Cust Item ID:
Customer:

Reference:

Approvals: Process Plan: W Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4686	pal

Rev A SMD

100	Hardinge CNC LATHE SMALL	0.00							
100									
Hardinge	Memo	0.00							
Hardinge CNC Lathe Small	Machine as per Folio FB164								

MJP 13/02/25

6

110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									

MJP 13/02/25

6

120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00							
Quality Control									

Jun/13-02-25

8

6.0

Work Order ID 97772

February-22-13 11:00:24 AM

97772

Page 2

Item ID: D4686-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: PRELIM Stop ***NS2***
Item Name: Spacer
Start Date: 2/22/13 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 3/01/13 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
122	Outsource process - Heat Treat	0.00							
122									
Outsource1	Memo	0.00							
Outsource process - Heat Treat	ISSUE P/O: <u>19178</u> ENSURE C OF C IS ATTACH								<u>CZ 13/02/26</u> (6)
124	Receive & Inspect for Damage & Mat'l Certs	0.00							
124									
Packaging	Memo	0.00							
Packaging	ENSURE C OF C IS ATTACH								<u>13/3/14</u> (6)
126	QC6- Inspect dimensions to drawing	0.00							
126									
QC	Memo	0.00							
Quality Control									<u>13/03/15</u> Prelim use aly JAS 16 9-83 Q T4 material (Heat treated)

Work Order ID 97772

97772

Page 3

February-22-13 11:00:24 AM

Item ID: D4686-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: PRELIM Stop ***NS2***
Item Name: Spacer
Start Date: 2/22/13 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 3/01/13 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00							
140 *140* QC Quality Control	QC7-Inspect Chemical Conversion Coat Memo	0.00 0.00							
150 *150* Packaging Packaging	Identify as per dwg & Stock Location: _____ Memo ***STOCK IN SKIDTUBE CELL***	0.00 0.00							

12.03.18

GP 13-5-30

ST 117

Work Order ID 97772

February-22-13 11:00:24 AM

97772

Page 4

Item ID: D4686-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: PRELIM Stop ***NS2***
 Item Name: Spacer
 Start Date: 2/22/13 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 3/01/13 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.00							
Quality Control									

Handwritten notes:
 Mapped op 9
 Rej A
 27
 BS 23
 POSITIVE RECALL
 POSITIVE BS 22 AUTH h
 REUSED 5 DATE 13/5/23
 to Rev A
 WME
 13-6-11

Picklist Print

February-22-13 11:00:23 AM

Page 1

Work Order ID: 97772

Parent Item: D4686-1

Parent Item Name: Spacer

Start Date: 2/22/13

Required Date: 3/01/13

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 13.02.20 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6T0.750W.058		Purchased	No			100	f	76.3170	0.304	1.28			
6061-T6 RD Tube .750 x.058W													

Location

Loc Qty

Loc Code

MAT015

76.317

10099

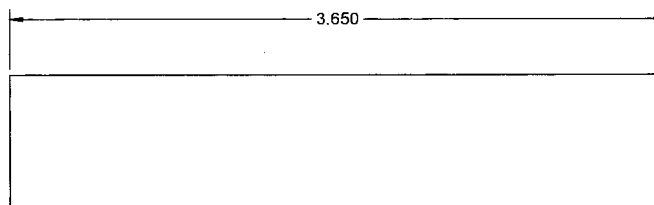
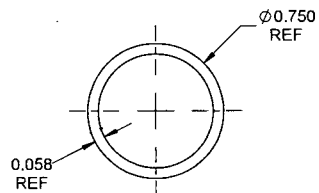
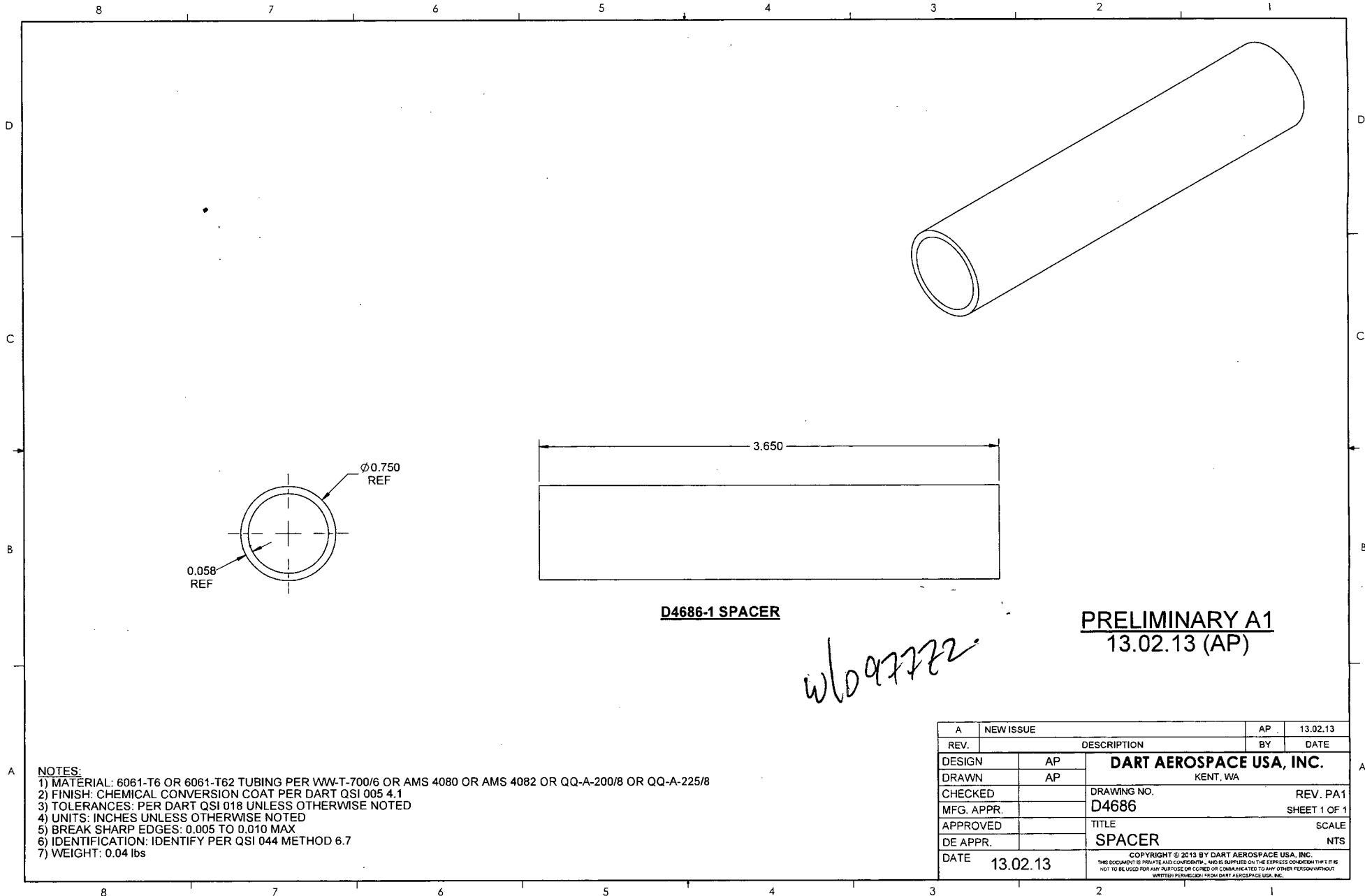
24

112652

52.317

1,84'

MJP
13/02/25



D4686-1 SPACER

wlo 97772

PRELIMINARY A1
13.02.13 (AP)

NOTES:

- 1) MATERIAL: 6061-T6 OR 6061-T62 TUBING PER WW-T-700/6 OR AMS 4080 OR AMS 4082 OR QQ-A-200/8 OR QQ-A-225/8
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 METHOD 6.7
- 7) WEIGHT: 0.04 lbs

A	NEW ISSUE	AP	13.02.13
REV.	DESCRIPTION	BY	DATE
DESIGN	AP	DART AEROSPACE USA, INC.	
DRAWN	AP	KENT, WA	
CHECKED		DRAWING NO.	REV. PA1
MFG. APPR.		D4686	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		SPACER	NTS
DATE	13.02.13	<small>COPYRIGHT © 2013 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

Linda Lacelle

From: David Duval
Sent: February-22-13 8:15 AM
To: Linda Lacelle
Subject: RE: EC 145 SKIDTUBE

Program/ rout and bom are made for D4753-1 doubler:- good to make a w/o for 8
Route and bom are made for D4686-1 cross bolt spacer:- good to make a w/o for 4 made at T6 / and make one for T4
that need to get ship
To make the samples you need to make a custom w/o's (see below)

From: Linda Lacelle
Sent: Friday, February 22, 2013 8:08 AM
To: David Duval
Subject: RE: EC 145 SKIDTUBE

Did you make a route/bom?

From: David Duval
Sent: February-21-13 10:08 AM
To: Linda Lacelle
Cc: Jean-Luc Menard; Alex Pharand
Subject: RE: EC 145 SKIDTUBE

Could you make two custom w/o to fabricate the test samples with (4) T6 material and a other one with (4) T4 material.
The skidtube extrusion is (D2962)
Length of samples are cut at 3 inch.
Drill holes
Install (2) doubler (D4753-1)
Swage (1) crossbolt spacer (D4686-1) per dwg

Thanks.

DAVID DUVAL
Production Engineering Coordinator

DART AEROSPACE
T 1 613 632-5200 > 234
F 1 613 632-5246
1 800 556- 4166
www.dartaerospace.com



Please consider your environmental responsibility before printing this e-mail

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC, J7R 5A8

Tel: 450-473-1884 / Fax: 450-491-5498

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
184123	1

CLIENT / customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY

ON K6A 1K7

COMMANDE DU CLIENT customer-po	BON DE LIVRAISON DU CLIENT customer shipper no.	MATÉRIEL material	CODE DE TRAITEMENT mat'l heat code	NUMÉRO DE LOT lot number
PO19178		AL-6061		

SPÉCIFICATIONS DU PROCÉDÉ processing specifications

SOL ANNEAL
SINGLE AGING TO CONDITION T42

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
CONDUCTIVITY	35 - 43 %IACS	35 (60kHz)	37.0 - 39.0 %IACS
HARDNESS	60 HREW MIN	35	68.0 - 70.5 HREW

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
346	8	D4202-1 (100) SPACER REFERENCE 97447 (6) D4686-1 SPACER REFERENCE 97772 (240) D4720-1 SPACER REFERENCE 97123 CONTENANT; 1 BOÎTE DE CARTON

Operation	Temp. spécifiée Specified Temp	Temps de trempage Spécifié Specified Soak Temp	Atmosphère	Carbone Carbon Potential	Q-Media Q-Temp	Four # Furnace #	Date Départ Start Date	Heure d'entrée Time In	Heure de sortie Time Out	Date Complétée Date complete
1.00 CONT. INIT.										
2.00 Degrease										
3.00 PREPARING	COMPTAGE									
4.00 PREHEAT 1	529°C	0:30	air			701				

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ

ST-EUSTACHE, QC, J7R 5A8

Tel: 450-473-1884 / Fax: 450-491-5498

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
184123	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

Operation	Temp. spécifiée Specified Temp	Temps de trempe Spécifié Specified Soak Temp	Atmosphere	Carbone Carbon Potential	Q-Media Q-Temp	Four # Furnace #	Date Départ Start Date	Heure d'entrée Time In	Heure de sortie Time Out	Date Complétée Date complete
5.00 WATER TEN										
6.00 SOL ANNEA	529°C	0:35	AIR		WATER 32MAX	701				
7.00 QUENCHDE										
8.00 WATER TEN										
9.00 PREPARING										
10.00 AGE HARDE		96:00								
11.00 HARDN INS										
12.00 CONDUCT										
13.00 FINAL INSP							03-11-2013			03-11-2013

COMMENTAIRES / comments

Le traitement thermique a été fait en utilisant des équipements en conformité avec la spécification demandée.
Toutes les opérations de traitement thermique ont été faites en conformité avec les requis de la spécification demandée et toutes les vérifications et les tests demandés ont été faites et documentés.
Aucun changement ou dérogation n'a été faite par rapport au traitement thermique demandé.
On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec les spécifications du matériel et le bon de commande et le matériel rencontre les exigences spécifiées.

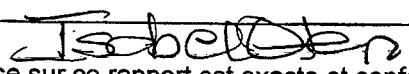
All the heat treatment processing performed on this order was accomplished using heat treatment equipment compliant with the requested heat treatment specification.

All the heat treatment operations were accomplished in accordance with the requested/required heat treatment specification and all required verifications test have been performed and documented.

No unauthorized changes or deviations to required heat treatment specifications or procedures have been performed.

We certify that the material was manufactured, sampled, tested and inspected in accordance with the material specification and the purchase order and was found to meet the requirements.

MAR 12 2013

APPROUVÉ / Approved:  / Nous certifions que toute l'information comprise sur ce rapport est exacte et conforme aux requis du client. / We certify that all the information on this report is exact and in accordance with the order requirements.

Receiving Report

Date: 9/9/14

Batch No: M112652

Supplier: MARMAN

Dart P/O: 10296

Packing Slip: Yes ☒ No ☐
 Invoice: Yes ☐ No ☒
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐
 Waybill Attached: Yes ☒ No ☐ N/A ☐
 Shipment Complete: Yes ☒ No ☐ N/A ☐
 QC6 Inspection ☒ 8/09/14 N/A ☒
 Work Order 0910914

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments
M60611	610.500 W.058	500	504	0	4	
M606110	700 W.058	108	0	0	8	

Initials of receiver (if shipment OK) Level 12 [Signature]

Production/Admin: 09/09/14
 Date: 09/09/14
 Received/Costing: RCO 10296
 Initial: CR

Location _____

Purchase Order Receipt Listing

September 14, 2009 2:38:01 PM

All amounts are calculated in domestic currency.

All Vendors PO ID PO10296 All Receipt Dates All Line Item Types
All Item ID/GL/WOs All Rec. Employees All Currencies
Grouped by Vendor ID

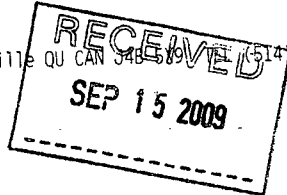
Grouped by Vendor ID											
Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
VendorID\Vendor Name		VC-MAR001	Marmon/Keystone Canada Ltd.								
PO10296	1		M304TR0.750W.049 f		9/02/09	9/14/09	300.0000	\$2.25	0.0000	0	OL \$675.00
CAD	No		304 RD Tube .750 x .049W	f	300.0000	LAVO01		\$675.00	0.0000	0	
			112652								
	2		M6061T6T0.375W.0 f		9/02/09	9/14/09	204.0000	\$1.85	0.0000	0	OK \$377.40
	No		6061-T6 RD Tube .375 x.035W	f	204.0000	LAVO01		\$377.40	0.0000	0	
			112652								
	3		M6061T6T0.500W.0 f		9/02/09	9/14/09	504.0000	\$2.48	0.0000	0	OK \$1,249.92
	No		6061-T6 RD Tube .500 x.058W	f	500.0000	LAVO01		\$1,249.92	0.0000	0	
			112652								
	4		M6061T6T0.750W.0 f		9/02/09	9/14/09	108.0000	\$3.25	0.0000	0	OK \$351.00
	No		6061-T6 RD Tube .750 x.058W	f	100.0000	LAVO01		\$351.00	0.0000	0	
			112652								
Total Received Quantity:										1,116.0000	
Total Qty to Inspect (PO U/M):										0.0000	
Total Reject Quantity:										0.0000	
Total Receipt Value:										\$2,653.32	
Total Balance Due Quantity:										0.0000	

Marmon / Keystone Canada Inc.



Specialty Steels

290 Chemin du Tremblay Boucherville



514 527 9153 FAX (450) 641 4357

SOLD TO: - VENDU A:
DART AEROSPACE LTD
1270 ABERDEEN STREET

SHIPPED TO: EXPÉDIER À:
DART AEROSPACE LTD
1270 ABERDEEN STREET

HAWKESBURY

ON CAN K6A 1K7

HAWKESBURY

ON CAN K6A 1K7

INVOICE
FACTURE
409494

INVOICE DATE
DATE DE FACTURE
9/10/09

PAGE 1

SHIP VIA / EXPÉDIÉ PAR EPIC		F.O.B. / F.A.B. BOUCHERVILLE		G.S.T. / T.P.S. R137204947 Q.S.T. / T.V.Q. 1016343044 TQ0001 LE	
YOUR ORDER NO. / VOTRE N° DE COMMANDE 10296		SALESMAN / VENDEUR GHI		MARMON / KEYSTONE # 14470	
				PROVINCIAL TAX NO. 6122-5207 N° TAXE PROVINCIALE	
ORDERED / COMMANDÉE	DESCRIPTION			SHIPPED / EXPÉDIÉE QUANTITY / QUANTITÉ	UNIT PRICE / PRIX UNITAIRE AMOUNT / MONTANT
204 FT	ALUMINUM SMLS TUBE T6 DRAWN B-210 ATS .375 .035 D6061 Cust. part#: M6061T60.375W.035			204 FT 9 LBS 17 Pieces	1.850 /FT 377.40
72 FT	ALUMINUM SMLS TUBE T6 DRAWN B-210 ATS .750 .058 D6061 Cust. part#: M6061T6T0.750W.058			72 FT 11 LBS 6 Pieces	3.250 /FT 234.00
348 FT	ALUMINUM SMLS TUBE T6 DRAWN B-210 ATS .500 .058 D6061 Cust. part#: M6061T6T0.500W.058			348 FT 33 LBS 29 Pieces	2.480 /FT 863.04
300 FT	STAINLESS STEEL SEAMLESS TUBE ANNEALED AND PICKLED A213/SA213 A.W. 304L SMLS TUBE 3/4 X .049 SA213 A.W. A&P SIS .750 .049 F304L Cust. part#: M304TR0.750W.049			300 FT 110 LBS 15 Pieces	2.250 /FT 675.00
36 FT	ALUMINUM SMLS TUBE T6 DRAWN B-210 ATS .750 .058 D6061			36 FT 5 LBS 3 Pieces	3.250 /FT 117.00

TERMS: NET 30 DAYS
PLUS 2% PER MONTH ON
ALL OVERDUE ACCOUNTS.

TERMES: NET 30 JOURS
PLUS 2% PAR MOIS
SUR COMPTE PASSÉ DÙ.

FOR CONDITIONS OF SALE REFER TO BACK OF INVOICE.
POUR LES CONDITIONS DE VENTE, VOUS TROUVEREZ LES
RENSEIGNEMENTS À L'ENDOS DE LA FACTURE ORIGINALE.

G.S.T.
T.P.S.

PROVINCIAL TAX
TAXE PROVINCIALE

**PAYMENT OF THIS INVOICE IS DUE BY
LE RÉGLEMENT DE CETTE FACTURE EST EXIGIBLE AU PLUS TARD LE**

Marmon / Keystone Canada Inc.



Specialty Steels

290 Chemin du Tremblay Boucherville QU CAN J4B 5X9 TEL (514) 527 9153 FAX (450) 641 4357

INVOICE
FACTURE
409494

INVOICE DATE
DATE DE FACTURE

9/10/09

PAGE 2

SOLD TO: VENDU À:
DART AEROSPACE LTD
1270 ABERDEEN STREET

SHIPPED TO: EXPÉDIER À:
DART AEROSPACE LTD
1270 ABERDEEN STREET

HAWKESBURY

ON CAN K6A 1K7

HAWKESBURY

ON CAN K6A 1K7

SHIP VIA / EXPÉDIÉ PAR EPIC		F.O.B. / F.A.B. BOUCHERVILLE		G.S.T. / T.P.S. R137204947 Q.S.T. / T.V.Q. 1016343044 TQ0001 LE	
YOUR ORDER NO / VOTRE N° DE COMMANDE 10296	SALESMAN / VENDEUR GHI		MARMON / KEYSTONE # 14470	PROVINCIAL TAX NO. 6122-5207	
				N° TAXE PROVINCIALE	

ORDERED / COMMANDEE	DESCRIPTION	SHIPPED / EXPÉDIÉ QUANTITY / QUANTITE	UNIT PRICE / PRIX UNITAIRE	AMOUNT / MONTANT
156 FT	Cust. part#: M6061T6T0.750W.058 ALUMINUM SMLS TUBE T6 DRAWN B-210 ATS .500 .058 D6061 Cust. part#: M6061T6T0.500W.058	156 FT 15 LBS 13 Pieces	2.480 /FT	386.88
	Energy Surcharge			12.20

ORIGINAL INVOICE / FACTURE ORIGINALE

TERMS: NET 30 DAYS
PLUS 2% PER MONTH ON
ALL OVERDUE ACCOUNTS.

TERMS: NET 30 JOURS
PLUS 2% PAR MOIS
SUR COMPTE PASSE DÙ.

FOR CONDITIONS OF SALE REFER TO BACK OF INVOICE.
POUR LES CONDITIONS DE VENTE, VOUS TROUVEREZ LES
RENSEIGNEMENTS À L'ENDOS DE LA FACTURE ORIGINALE.

G.S.T. /HST T.P.S.	133.28
PROVINCIAL TAX TAXE PROVINCIALE	.00

10/12/2009

2.798.80

PAYMENT OF THIS INVOICE IS DUE BY
LE RÈGLEMENT DE CETTE FACTURE EST EXIGIBLE AU PLUS TARD LE

Marmon/Keystone Canada Inc.



Specialty Steels

PACKING SLIP

290 Chemin du Tremblay
Boucherville QU CAN J4B 5X9
TEL. 514/527-9153
FAX. 450/641-4357

PAGE... 1
Order : 14470
Date... 09/10/2009

SOLD TO:

DART AEROSPACE LTD
1270 ABERDEEN STREET

HAWKESBURY ON CAN K6A 1K7

SHIPPED TO:

DART AEROSPACE LTD
1270 ABERDEEN STREET

HAWKESBURY ON CAN K6A 1K7

SHIP VIA		F.O.B.	SALESPERSON	YOUR ORDER NO.	
EPIC		BOUCHERVILLE	G. Dulude	10296	
Ordered	Description	Number Pieces	Quantity Shipped	Back Ordered	
01	204 /FT Fax all papers to Linda Lacelle 613-632-1053 Mill tests required with all shipment ALUMINUM SMLS TUBE ATS .375 .035 D6061 Tariff Number: 7608.20.00.90 Cust. part#: M6061T60.375W.035 HT#.....: 521252 Total...	17 17	204/FT 204/FT	IN	
02	72 /FT ALUMINUM SMLS TUBE ATS .750 .058 D6061 Tariff Number: 7608.20.00.90 Cust. part#: M6061T6T0.750W.058 HT#.....: D924 Total...	6 6	72/FT 72/FT	IN	
03	348 /FT ALUMINUM SMLS TUBE ATS .500 .058 D6061 Tariff Number: 7608.20.00.90 Cust. part#: M6061T6T0.500W.058 HT#.....: D925 Total...	29 29	348/FT 348/FT	IN	
04	300 /FT STAINLESS STEEL SEAMLESS TUBE 304L SMLS TUBE 3/4 X .049 SA213 A.W. A&P STS .750 .049 F304L Tariff Number: 7304. Cust. part#: M304TR0.750W.049 HT#.....: 772-3850 Total...	15 15	300/FT 300/FT	IN	
05	36 /FT ALUMINUM SMLS TUBE ATS .750 .058 D6061 Tariff Number: 7608.20.00.90 Cust. part#: M6061T6T0.750W.058 HT#.....: 175-48777 Total...	3 3	36/FT 36/FT	IN	
06	156 /FT ALUMINUM SMLS TUBE ATS .500 .058 D6061 Tariff Number: 7608.20.00.90 Cust. part#: M6061T6T0.500W.058 HT#.....: F00003727 Total...	13 13	156/FT 156/FT	IN	

No. of Bdls/Pieces

2 / 0

Total Weight.....

183

Customers.: _____

PO 9/14/11



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO10296

Purchase Order Date 8/28/09

PO Print Date 8/28/09

Page Number 1 of 2

Order From :

VC-MAR001

MARMON/KEYSTONE CANADA LTD.
290 CHEMIN DU TREMBLAY
BOUCHERVILLE, QC J4B 5X9
CA

FAKED
08/28/09

Contact Name
Vendor Phone 800 361 8142
Vendor Fax 450 641 4357
Vendor Account Nbr

Buyer Chantal Lavoie
Requisition Nbr
Tax Resale Nbr 10127-2607
Terms Net 30
Currency CAD

FOB

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M304TR0.750W.049	304 RD Tube .750 x .049W	9/02/09 Yes	✓ 300.00	Epic collect f <i>NO</i>	\$2.2500	\$675.00
Special Inst:			MATERIAL: AISI 304/316 SS SEAMLESS ROUND TUBING SPEC'S: ASTM A213 OR ASME SA213 OR ASTM A269				
2	M6061T6T0.375W.035	6061-T6 RD Tube .375 x.035W	9/02/09 Yes	✓ 204.00	Epic collect f	\$1.8500	\$377.40
Special Inst:			MATERIAL: 6061-T6 OR 6061-T62 TUBING PER: WW/T-700/6 OR AMS 4080 OR AMS 4082 OR QQ-A-220/8 OR QQ-A- 225/8 PLEASE SHIP BACK ORDER WHEN READY				
3	M6061T6T0.500W.058	6061-T6 RD Tube .500 x.058W	9/02/09 Yes	500.00	Epic collect f	\$2.4800	\$1,240.00

112652

**MATERIAL CERTIFICATION
REQ'D UPON DELIVERY**

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

Change Nbr: 1

Change Date: 8/28/09



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO10296

Purchase Order Date 8/28/09

PO Print Date 8/28/09

Page Number 2 of 2

Order From :

VC-MAR001

MARMON/KEYSTONE CANADA LTD.
290 CHEMIN DU TREMBLAY
BOUCHERVILLE, QC J4B 5X9
CA

Contact Name
Vendor Phone 800 361 8142
Vendor Fax 450 641 4357
Vendor Account Nbr

Buyer Chantal Lavoie
Requisition Nbr 10127-2607
Tax Resale Nbr Net 30
Terms CAD
Currency
FOB

4	M6061T6T0.750W.058	6061-T6 RD Tube .750 x.058W	9/02/09	100.00	Epic collect	\$3.2500	\$325.00
			Yes		f Mc 108		

PO Total:

\$2,617.40

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

Change Nbr: 1

Change Date: 8/28/09

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

KEMACK ISO 9001:2000		Świadectwo odbioru 3.1 / Inspection certificate 3.1		080009048/08/ZT PN-EN 10204:2006									
Nr kontraktu i zamówienia klienta Order No and date		Zamówienie sprzedaży Sales order		Zamówienie produkcyjne Production order									
PO13254		080001108/40		080009048									
Przedmiot i wykonanie Item and specification		Wymiary lub rysunek Dimensions or drawing		Gatunek stopu Alloy grade									
Drawn tube ASTM B 210 AMS-WW-T-700/6		OD: 0.7500" WALL: 0.0580" L: 144"		8061 AlMg1SiCu									
				Wytap Heat									
				D824									
				kg									
				148									
				Szkic Pieces									
				6/7									
				Stan dostawy Temper									
				T8									
Kontrolę techniczną powyższego zamówienia przeprowadził SWWL-LFC Laboratorium. Wyniki badań podano niżej. Technical inspection of above mentioned lot has been carried out by the SWWL-LFC Laboratory. Inspection results are stated below.													
1. SKŁAD CHEMICZNY - CHEMICAL COMPOSITION													
Gatunek stopu Alloy grade	Wytap Heat	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti				
8061	D824	0,74	0,18	0,33	0,05	1,04	0,34	0,08	0,02				
2. WŁASNOŚCI MECHANICZNE - MECHANICAL PROPERTIES													
Nr próby Sample no.	Stan dostawy Temper	Yield [KSI] [ksi/in ²]	Tensile [KSI] [ksi/in ²]	A %	A _{50mm} %	Twardość Hardness HB	Inne badania Other tests						
139	T8	40,6	48,6		13,5								
3. BADANIA METALOGRAFICZNE - METALLOGRAPHIC TESTS													
Nr próby Sample no.	Struktura Structure												
Powierzchnię i wymiar zbadano Surface and dimensions were checked		ANSI H35-2				Materiał oznaczono Material was marked							
Na podstawie wyżej przeprowadzonych prób materiał zwalono. According to above mentioned tests, the material has been approved.													
Kontrola jakości Quality Inspection Unit								Data Date					
		Kierownik Laboratorium Badal Politechnicznych mgr inż. Grzegorz MIKOWIEC						24.09.2008					

8
02/04/14

ATS- .750- .058- -D6061 * 175-48777 * 0004997 * BN5071 * 6/19/2007

06/05/2007 From: MARMON/KEYSTONE
M/K OR:
C.P.O.: BN5071
C PART:

INIT.:

To:

OR. REF:
SLSPRS:

KAISER CHANDLER

CERTIFICATION and PHYSICAL TEST RESULTS

QP 026A

These results are for

MARMON/KEYSTONE CORP

Mill Number

175-48777

Purchase Order No 60-28154-001

Alloy

6061

Temper T6

Part No, Item No, Commodity No or Inventory No

Size Description

.750 IN OD X .058 IN WALL

Specification(s)

WW-T-700/6F ASTM B210-04 AMS 4082N

Additional procedures as called for on Specification:

WE TAKE EXCEPTION TO PARA. 5.2.1. Per AMS 4082N, WAS NOT OILED. REVISED TEST CERTIFICATE, 06/05/07.

CHANDLER PLANT
BOX 5011 8573 W WILLES ROAD
CHANDLER AZ 85226
PH: 602.796.1097
FAX: 602.796.0596
SALES: 602.638.8274

Limit	Chemical Composition			Per Aluminum Standards and Data 2003						Each 0.05	Remainder
MIN	0.40	0.15	0.15	0.8	0.04	0.25	0.15	0.02	0.01	Total 0.15	
MAX	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.02	0.01	
Actuals	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others	Al
	0.64	0.28	0.23	0.03	0.97	0.07		0.02	0.01		
	0.82	0.30	0.19	0.03	0.95	0.08		0.04	0.01		
										Each 0.06	Remainder
										Total 0.15	

* For WW-T-700/6F specification, maximum Si plus Fe is .48%.

** 1100 Alloy Max Si + Fe is 0.95 %

Mechanical Properties		Properties	
Lot #	Temp	Yield PSI	Ultimate PSI
48896 Al T6		43,400	47,700
48896 B1 T6		43,100	47,100

Domestic Melt Source Made in USA

We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description; and that samples representative of the material met the composition limits and had the mechanical properties as indicated.

Date 05/08/2007

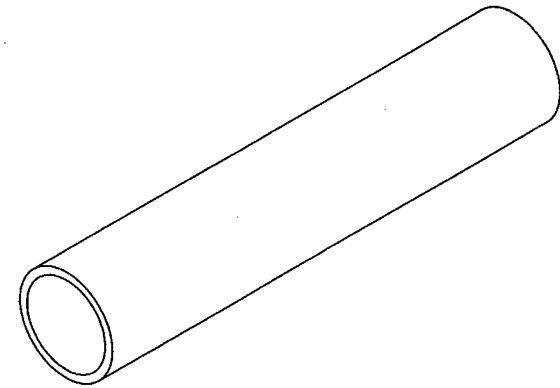
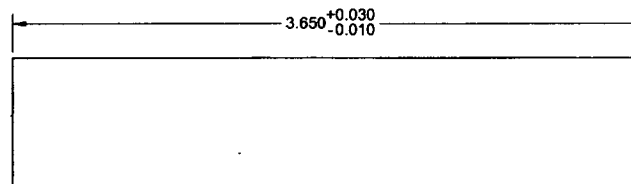
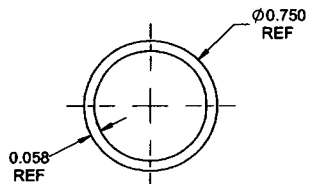
Wilfredo A. de la Cruz

Wilfredo A. de la Cruz
Sr. Metallurgical Engineer

Cert/Act

Signature

AT 75.058 734



D4686-1 SPACER

RELEASED
2013-03-25

NOTES:

- 1) MATERIAL: 8061-T4/-T42 SEAMLESS ALUMINUM TUBING Ø0.750 X 0.058 WALL PER WW-T-700/6, AMS 4081 OR ASTM B210 (REF. DART SPEC M6061T4T0.750W.058) OR 8061-T6/-T62 ALUMINUM TUBING PER WW-T-700/6, AMS 4080 / 4082, OR ASTM B210 (REF DART SPEC M6061T6T0.750W.058) HEAT TREAT TO -T4/-T42 CONDITION. MIN UTS = 30 KSI (60 HREW MIN)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 METHOD 6.7
- 7) WEIGHT: 0.04 lbs

A		NEW ISSUE		DESCRIPTION		AP	13.02.13
REV.						BY	DATE
DESIGN		AP		DART AEROSPACE USA, INC. KENT, WA			
DRAWN		AP					
CHECKED		AP		DRAWING NO.		REV. A	
MFG. APPR.		AP		D4686		SHEET 1 OF 1	
APPROVED		AP		TITLE		SCALE	
DE APPR.		AP		SPACER		NTS	
DATE				13.02.13		COPYRIGHT © 2013 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR DISCLOSED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	